

REMARKS

Status of Claims: Claims 1, 12, 23-27 and 29-33, as previously amended, as well as claims dependent from claims 1 and 12, are now in the application for further consideration in light of the present remarks and in light of the block diagram which was Attachment A to the previous response Amendment C.

We thank Examiner Thompson for being willing initially to be present for personal interview with our local representative, Mr. Ross Hunt, who called for that purpose, but Applicants feel that opportunity was missed when Examiner later determined that the interview unfortunately could not be held before the filing of Request for Continued Examination (RCE), as Applicants believe that prosecution could have been advanced by interview without requiring an RCE which is time-consuming and expensive.

The main points it was proposed to be discussed at the proposed interview concern teachings of the Katayama patent 5,537,496 and the manner in which the claims define over this reference. In this regard, it is respectfully submitted that the Examiner has misinterpreted both the claims and the Katayama reference.

For example, claim 1 requires that the second converting unit converts the image data into secondary data, i.e., the image data converted by the first converting unit, and that the dissimilarity calculating unit calculates dissimilarity between the primary data (which is defined as the data produced by the first converting unit) and the secondary data (which is defined as the data produced by the second converting unit).

The random number generator 32 of Katayama merely produces (as would be expected) a random number, which is added by adder 36 to the output M of the gradient conversion table 30 to produce the output L. Although the N-bit (N=8) input image data is shown in Figure 5 for reference purposes, the 8-bit image data is not an input to adder 36 (the only inputs are M and K), and not part of the processing taking place at adder 36. Further, generator 32 does not calculate anything, it simply generates a number, and certainly does not calculate a dissimilarity between the primary data (which the Examiner reads as the N-bit data) and the secondary data (the M-bit data). In this regard, the "decimal part" of the M-bit data is determined by table 30. Further, to the extent that "tertiary data" is calculated, this tertiary data is clearly not the "K-bit" random number generation as the Examiner contends (the K-bit number is an input) but rather the L-bit data output of adder 36. Thus, it is respectfully submitted that the Examiner is misreading Figure 5 and the description thereof at column 6, lines 3-19, which simply confirm the foregoing (see also Figure 3), and that claim 1 simply cannot be properly read on Katayama as is done in the Office Action.

We observe that in rejecting under Section 103, the primary references relied upon by Examiner are Katayama 5,537,496 in view of the technical reference *Sams Teach Yourself Linux in 24 Hours*, by Bill Ball and Stephen Smoogen, copyright 1998, Sams Publishing and Red Hat Press ("Ball"). Thus, the combination relied upon is Katayama-and-Ball. Based on this combination, Examiner has rejected 1-4, 6-15, and 17-33.

Because Applicants considered that Examiner has misunderstood Katayama, Applicants referred Examiner to

Attachment A, a block diagram that accompanied Amendment C. It was not submitted to add impermissible new matter. Instead it was to help in understanding of the invention, by helping to understand that the present invention and Katayama function differently and also to point out that they function for different respective purposes. It is still an aid to understanding.

If in view of all of the foregoing, Examiner now understands Katayama, it ought to be evident that the Katayama-and-Ball combination does not provide a teaching or a coherent or meaningful suggestion to the person having ordinary skill in the art of the claimed features set forth in claim 1, which is clearly different from Katayama if not misunderstood. It would not be useful to the skilled artisan to combine the unrelated teachings of Katayama, which aims to solve the unrelated problem of image "banding" with the teachings of the Ball article so as to provide what is presently set forth in claim 1, as such an attempted combination would not be workable, given the different operational features and different goal of the Katayama reference. Because of these differences, it would not be logical for the skilled artisan to attempt to combine the references, as such an unworkable combination would not motivate the skilled artisan to provide the specific combination of claim 1. See In re Kahn¹, No. 04-1616, U.S.

¹ "'motivation-suggestion-teaching' test asks not merely what references disclose, but whether person of ordinary skill in art, possessed with understandings and knowledge reflected in prior art and motivated by general problem facing inventor, would have been led to make claimed combination, and from this it may be determined whether overall disclosures, teachings, and suggestions of prior art, and level of skill in art, support legal conclusion of obviousness." 78 U.S.P.Q.2D (BNA) 1329, *; USPQ Headnotes 1329, **

Court of Appeals Federal Circuit, 78 U.S.P.Q.2D (BNA) 1329,
decided March 22, 2006.

Thus, the present claim 1 is patentable over Katayama and
should be held allowable.

Further, for the same reasons, it is not sufficient to
further combine the Katayana-Ball combination with either Imai
6,038,369 [as in the case of claims 6-7, 10, 17-18 and 21] or
Hayashi 5,754,683 [as in the case of claims 8, 9, 19-20, 29,
31 and 33].

Applicants repeat and incorporate herein the arguments of
Amendment C.

Thus, for the very same reasons as relate to claim 1,
dependent claims 2-4 and 6-11 should be allowable as they all
relate back to claim 1. (Claim 5 was previously cancelled.)

Claim 1 can be regarded as representative in that the same
limitations appear also in each of claims 1, 12, 23-27 and 29-
33).

Thus, claim 12 adds the following recitals:

 said recording unit is a unit for irreversibly compressing
 the primary data and recording the irreversibly compressed
 primary data, and

 said dissimilarity calculating unit is a unit for expanding
 the irreversibly compressed primary data, calculating data
 that determines correlation between the expanded primary
 data and the secondary data, and employing the calculated
 data as the tertiary data.

As pointed out, the Katayana-Ball combination does not suggest the claimed combination, much less that of claim 12. The diagram of Attachment A (of the prior response), when compared with Figures 1 and 3 of Katayana, helps to understand that the present invention and Katayana are different in function and purpose. The Katayana-Ball combination does not teach or suggest the features of claim 12. Therefore, claim 12 and its dependencies claims 12-15 and 17-22 should be patentable in the present application.

For comparable reasons, claims 23-27 should be viewed as patentable over the Katayana-Ball combination. Claim 23 provides:

23. (previously amended) A recording medium on which an image processing program is recorded, the image processing program comprising the steps of:

converting image data into primary data having an N-bit range according to a first gradation conversion characteristic;

converting the image data into secondary data having an M-bit range according to a second gradation conversion characteristic that is lower in the degree of level compression than the first gradation conversion characteristic or that causes no level compression, where M is greater than N;

using a dissimilarity calculating unit for calculating dissimilarity between the primary data and the secondary data according to each position of each pixel and employing the calculated data as tertiary data; and

recording the primary data and the tertiary data in a file.

The parallelism of claim 23 with the requirements of claim 1 will be noted. The Katayana-Ball combination does not

suggest to the skilled artisan the claimed combination of claims 1, 12 or 23, for the reasons pointed out. The diagram of the prior response's Attachment A (helping to illustrate the operation of the invention of claim 23 just as it does that of claims 1 and 12) when compared with Figures 1 and 3 of Katayana, is an aid to appreciating that the present invention and Katayana are different in operational function and purpose. Because the skilled artisan would not be led, for the reasons given above, to consider Katayana so as to combine Katayana and Ball, such Katayana-Ball combination as proposed by the examiner (but only after consideration of the applicants' claim) does not teach or suggest the method features of claim 23. Therefore, claim 23 and its dependency claim 24 should be held allowable in the present application.

Similarly, and for the same reasons of claim 23, because of the same limitations noted above, it should be apparent that claim 25 and claim 26 dependent from claim 25 cannot be considered obvious over the Katayana-Ball combination.

Claim 27 has limitations corresponding to those of claim 1 and 12, and for the reasons set forth above, should be viewed as unobvious and patentable over the Katayana-Ball combination. Dependent claim 28 should accordingly be allowable with claim 27.

Claim 28 is comparable to claim 27 in including the same limitations, being those corresponding to those of claim 1 and 12, and for the reasons set forth above; and should accordingly be allowable in the application.

Claim 29 sets forth an image reproducing apparatus for reproducing a file generated by an image recording apparatus, the limitations therein corresponding to those of claim 28 and so also those of claims 1 and 12, and as previously amended, thus should also be allowed over the Katayana-Ball combination.

Claims 30, 31, and 32 were each previously amended to include comparable limitations generally corresponding to those of claims 1 and 12, which define over the Katayana-Ball combination so that they also should be allowable in the application.

Applicants incorporate and restate by reference the arguments and remarks of Amendment B fully as if set forth herein. Thus, for example, Applicants point out that, relative to the cited art, the present claimed invention has a further advantageous effect from storing the primary and tertiary information, in that 1) it can reproduce an average image data based on the primary data only, and 2) it can reproduce image data having a large amount of gradation information data, based on the primary and tertiary data.

Summary: Accordingly, each of claims 1, 12, 23-27 and 29-33, including each of the remaining claims directly or ultimately dependent from claims 1, 12, 23-27 and 29-33, is submitted properly to be patentable in the application as the art, considered by itself apart from the invention of Applicants (and without recourse to hindsight interpretation, which could not be proper). The Ikeda-Ercan-Ball combination fails to provide to the person having ordinary skill in the art at the time of the present invention the features set forth in claims 1-4, 6-15, and 17-33 of the present application.

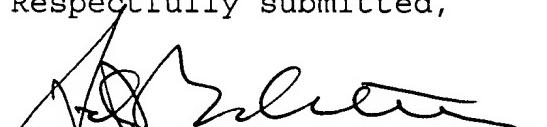
It is respectfully contended that that the application is in good order for allowance, and that a Notice of Allowance should be issued.

If Examiner believes there is any remaining issue, which could be readily resolved or other action could be taken to advance this application, such as Examiner's amendment or interview by telephone or in person, it is requested that Examiner please telephone the undersigned representative, who will cooperate fully to advance prosecution.

Any fees required but not paid herewith are authorized to be charged to Deposit Account No. 07-1985. If necessary to effect a timely response, this paper should be considered as a petition for extension of time of length sufficient to be considered timely.

Respectfully submitted,

31 July 2006
Date


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